Waterjet Memo 0.00 FLOW CNC Waterjet 1-Cut as per Dwg Dwg Rev:	Work Orde Wednesday, Sept		701 12 8:57:04 AM		*897	701*						Page 1
Start Date: 8/30/2012 Start Qty: 80.00 *80* Cust Item ID:	Revision ID:				Accept	*N900	040	100)* s	-	I ZI	
Required Date: 9/28/2012 Req'd Qty: 80.00	item Name:	Strut Bracket								Stop	*N	S2*
Reference: Approvals: Process Plan: Date: Date: SPC (Y/N): Date: Stop *NR2* Sequence ID/ Operation Description Set Up/ Run Hours Code Qty Qty Number Stamp Draw Nbr Revision Nbr 647.0100 A			- -				ID:		ı			
Date: NR2*	Reference:					r .			at .			
Sequence ID/ Work Center ID Description Set Up/ Run Hours Number Stamp Set Up/ Run Hours Set Up/ Run Hours Number Stamp Set Up/ Run Hours Number Stamp Set Up/ Run Hours Set Up/ Run Hours Stamp Stamp Set Up/ Run Hours Stamp Stamp Set Up/ Run Hours Stamp Stamp Stamp Set Up/ Run Hours Stamp Stam	Approvals:	Process Plan	n:	Date: 12-09-5) Tooling:			<u> </u>	F		!7	R1*
Description Run Hours Code Qty Qty Number Stamp		QC:	• (Date:	SPC (Y/N):	D:	ate:			Stop	*N	R2*
647.0100 A			-			Tool ID	Tool #			-		<u>-</u>
100	Draw Nbr	Revi	ision Nbr					-				
*100 * GC2- Inspect parts off machine FAI/FAIB 0.00 *100 * 100 *	647.0100	A								•	•	
Waterjet Memo 0.00 FLOW CNC Waterjet 1-Cut as per Dwg Dwg Rev:		**	FLOW WATER JET						86	ð		7m (2-9-1
110 QC2- Inspect parts off machine FAI/FAIB 0.00 *110*	FLOW CNC Waterj		1-Cut as per Dwg Rev:_	<u></u>	0.00							
110		-	2-Deburr if	necessary								
QC Memo 0.00	*11 0 *			nachine FAI/FAIB	0.00				86_			JM 12-9-16

89 701 (86)

NCR:	Yes	/	No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA:	Date:	•		

								•			QA Closed:	Date	::
Work Orde	r.				DISPOSITION				AGAINST	DE	PARTMENT	PROCESS	
Part N					Rework Scrap Use-as-is		ı	Skid-tube Machining noforming	Crosstube Small Fab Finishing			Water Jet d. Eng. Coor. e/Packaging	Engineering Quality Other
NCR N	0				Work Order Update			Large Fab	Composite			Supplier	
Root				Descri	ption of work order update	Ini	itial	A	ction		Sign &		
Cause	Date	Step	Qty	(or Non-conformance	Chie	f Eng	Des	cription		Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process													
Supplier	_								•		:	:	
Training	4			-									·
Unapproved	<u>l</u>	L	L		F.	<u>L</u> ΔULΤ	CATEC	ORY					
Landin	g Gear			- 	General	<u> </u>			<u> </u>		·		
	Bending Centre No Cracks Crushed/O Cuffs Heat Trea Inspection Ripples in Torque W Turning So	Crimped t n Strip in Bend Yaves in E	Tube _.		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish	H In In N N O O	nstructi Nainte Nislabel Nisread Offset Out of C	on Incomplete ons Incomplete nance led	/Unclear		Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	et ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	Wave/Tw	ist in Tub	e	[Folio	\Box	nitside	Dimensions					

Work Ord Wednesday, Sep		701 12 8:57:04 AM			*897				Page 2			
Item ID: Revision ID:	647.0112 Strut Bracket				Accept	*N900	040	100)*	Setup Sta	1 7	S1* S2*
Item Name: Start Date: Required Date: Reference:	8/30/2012	Start Qty: 80.00 Req'd Qty: 80.00		*80* *80*		Cust Item :					N	5/
Approvals:		n:	•		Tooling: SPC (Y/N):		ate:			Run Sta	1/1	R1* R2*
Sequence ID/ Work Center II	D	Operation Description			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*120 *120* QC Quality Control		QC8- Inspect parts - secon	nd check		0.00 0.00 SmB 129-17				86 Court			·
130 *130*		Form as per dwg NC BRAKE			0.00				84			SB 131
Brake NC Brake NC		Memo			0.00							

140

*14**0***

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

												DQA:	Date:	.
NCR:	Yes	/ No				WORK ORDER NON-	CO	NFOR	MANCE / UP	DATE				
						;			<u> </u>		÷	QA Closed:	Date:	
Work Ord	lor.				·	DISPOSITION				AGAINS	ST DE	PARTMENT	/PROCESS	
WOIK OIG					· · · · · · · · · · · · · · · · · · ·	Rework	7		Skid-tube	Crosstub	<u>,</u>		Water Jet	Engineering
Part	No					Scrap	┥	•	Machining	Small Fa		Dro	d. Eng. Coor.	Quality
Tare	140.					Use-as-is	┨		noforming	Finishir			e/Packaging	Other
NCR	No.					Work Order Update	┨	1	Large Fab	Composit		i iicc, stoi	Supplier	1 0 11 1
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Root					Descri	ption of work order update	Π	Initial	Ac	tion		Sign &		
Cause		Date	Step	Qty	c	or Non-conformance	Cr	nief Eng	Desc	ription	•	Date	Verification	QC Inspector
Doc/Data														
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	<u></u>	Bending			ļ	Bend	<u>_</u>	Grain			\perp	Ovalized	<u></u>	Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa			\perp	Over/Under	tolerance	Temperature/Cure
	<u></u>	Cracks				Broken/Damaged		1	on incomplete		\perp	Part Incorred		Weld
ĺ	\vdash	Crushed/	Crimped.		<u> </u>	Burrs	<u></u>	1	ions Incomplete/	'Unclear		Part Lost/Mi	ssing	Wrong Stock Pulled
	<u></u>	Cuffs			<u> </u>	Contamination	L	Mainte				Part Moved		
		Heat Trea	t		ļ	Countersink		Mislabe	led			Positioned V	√rong	
	1	Inspection	n Strip in	Tube		Cut Too Short	1	Misread	j		i	Power Loss/	Surge	Other

Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Page 3

Wednesday, September 05, 2012 8:57:04 AM

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Item ID: Revision ID: Item Name:	647.0112 Strut Bracket			Accept	*N900	040	100)* s	etup Star Stoj	I W	S1* S2*
	8/30/2012	Start Qty: 80.00 Req'd Qty: 80.00	*80* *80*		Cust Item I Customer:	D:					
Approvals:	Process Pla	n:	Date:	Tooling:	D:	ate:		R	kun Star Stop	, "I V I	R1*
	QC:		Date:	SPC (Y/N):	D:	ate:			50	*N	R2*
Sequence ID/ Work Center II)	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*150 *150* SprayPaint		Memo	ED DWC NOTE (0.00				86	_ Ø	_Ø	AP 13-6-1
Spray Painting			ER DWG NOTE 6 25452								
160		QC14- Inspect Spray Pair	ut` -	0.00	_						·
160 QC Quality Control		Memo		0.00 16	13/66/05	·		(+86))	<u> </u>	
170	·	Identify as per dwg & Sto	ck Location: <u>574</u> ;	37 o.oo					a	. 1	,
170 Packaging Packaging		Memo	K IN BASKET CELL**	0.00				86x		W. 13	3-06-6 0P
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												DQA:	Date:	9
NCR:	Yes /	' No		•		WORK ORDER NON-O	COI	NFORM	MANCE / UP	DATE				٠, ٠,
												QA Closed:	Date:	
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Root					Descri	otion of work order update		Initial	, Ac	tion		Sign &	,	
Cause		Date	Step	Qty	C	or Non-conformance	Ch	nief Eng	Desc	ription		Date	Verification	QC Inspector
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Unapproved	<u>i </u>						<u> </u>	T CATE	CORV		 			
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	_	pples in	-			Drill Holes	-	Offset			L	1		1

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing Finish

Work Ord Wednesday, Sep		701 012 8:57:04 AM		*897	701*							Page 4
Item ID: Revision ID: Item Name: Start Date: Required Date	647.0112 Strut Bracket 8/30/2012 : 9/28/2012	Start Qty: 80.00 Req'd Qty: 80.00	*80* *80*	Accept	*N900 Cust Item I Customer:		100)*	Setup	Start Stop		S1* S2*
Reference:												
Approvals:	Process Pla	ın:	Date:	Tooling:	Da	ate:			Run	Start	*N	R1*
	QC:		Date:	SPC (Y/N):	Da	ate:				Stop	*N	R2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID		Plan Code	Accep Qty	t Re Qt	•	Reject Number	Insp. Stamp
180		QC21- Final Inspection -	Work Order Release	0.00							1 ~	1/7
180 QC Quality Control		Memo		0.00					13	161	10	

												DQA:	Date:	
NCR:	Yes	/ No					WORK ORDER NON-C	10:	VFOR	MANCE / UPDATE				
												QA Closed:	Date:	
Nork Ord	er.						DISPOSITION			AGAINST	DE	PARTMENT	PROCESS	
Part					 		Rework Scrap			Skid-tube Crosstube Machining Small Fab		Pro	Water Jet	Engineering Quality
NCR							Use-as-is Work Order Update		Thern	noforming Finishing Large Fab Composite		ł	e/Packaging Supplier	Other
Root					Desc	crip	otion of work order update	1	Initial	Action		Sign &		
Cause		Date	Step	Qty		0	r Non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
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	\vdash	Centre No	ot Concer	itric to t)/s		BOM/Route	-	Hardwa			Over/Under		Temperature/Cure Weld
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	ı	Turning So	equence		1		Finish	ı	Jour of S	equence				ł

Wave/Twist in Tube

Picklist Print

` Wednesday, September 05, 2012 8:57:10 AM

Work Order ID: 89701

89701

Parent Item:

647.0112

647 0112

Parent Item Name: Strut Bracket

Start Date: 8/30/2012

Required Date: 9/28/2012

Start Qty: 80.00

Required Qty: 80.00

Comments:

IPP REV:A 12.08.14 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status .
M304S14GA		Purchased	No		100	sf	64.7400	0.0325	2 .7368 42			
*1/20/151/	1C							**	3.0			Jm12-9-1

304SS sheet .080

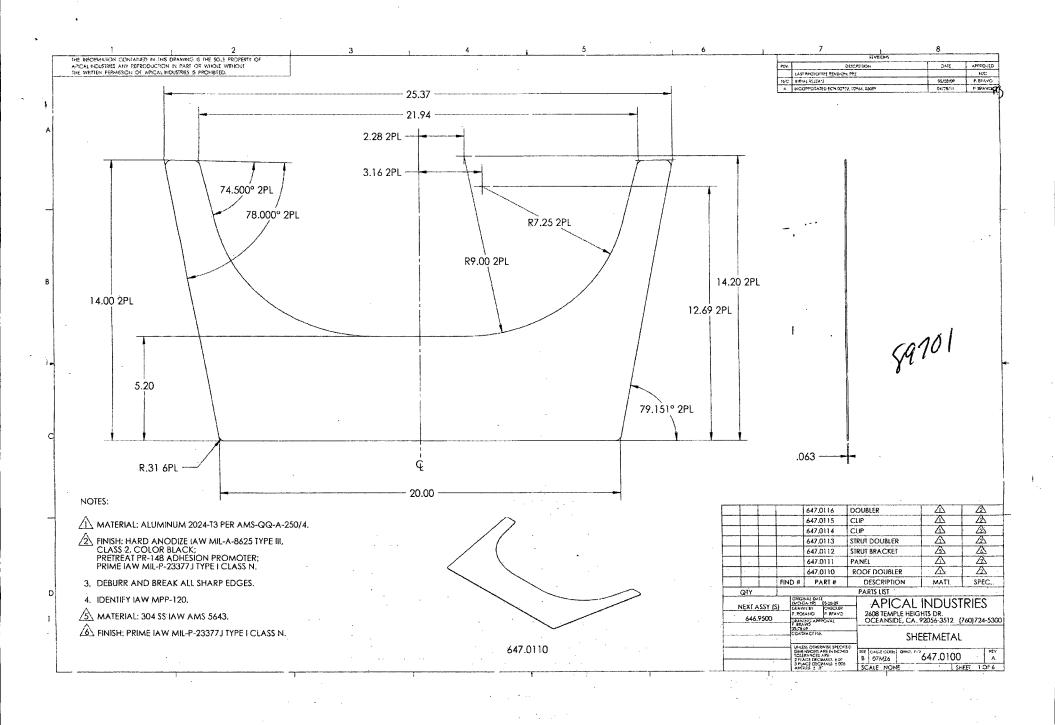
Location	Loc Qty	Loc Code	
MAT020	64.74		
117933	3.6		
119276	61.14		119276

Page 1

NCR:	· · · · · · · · · · · · · · · · · · ·														
													QA Closed:	Date:	
Nork Ord	er:						DISPOSITION				· ·	AGAINST DE	PARTMENT/		
Part l	No.						Rework Scrap			Skid-tube Machining noforming		Crosstube Small Fab Finishing		Water Jet d. Eng. Coor.	Engineering Quality Other
NCR I	No.						Use-as-is Work Order Update		rnem	Large Fab] (Composite	Rec/Stor	e/Packaging Supplier	Other
Root					Des	crip	otion of work order update	ı	nitial	"	Actio	n .	Sign &	•	,
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		Cracks			[Broken/Damaged		Inspecti	on incomplet	te		Part Incorrec	t 🗔	Weld
		Crushed/C	Crimped.				Burrs	Г	instruct	ions Incomple	ete/Und	lear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs					Contamination		Mainte	nance			Part Moved		
	.	Heat Treat	t		Ī		Countersink	П	Mislabe	led			Positioned W	/rong	
*		Inspection	Strip in	Tube			Cut Too Short	Г	Misread	İ			Power Loss/S	Surge	Other
		Ripples in					Drill Holes		Offset				•		
		Torque W		xtrusior	,		Drawing		Out of 0	Calibration					
		Turning Se					Finish		Out of S	equence					
		Wave/Twi	-	e			Folio		Outside	Dimensions					

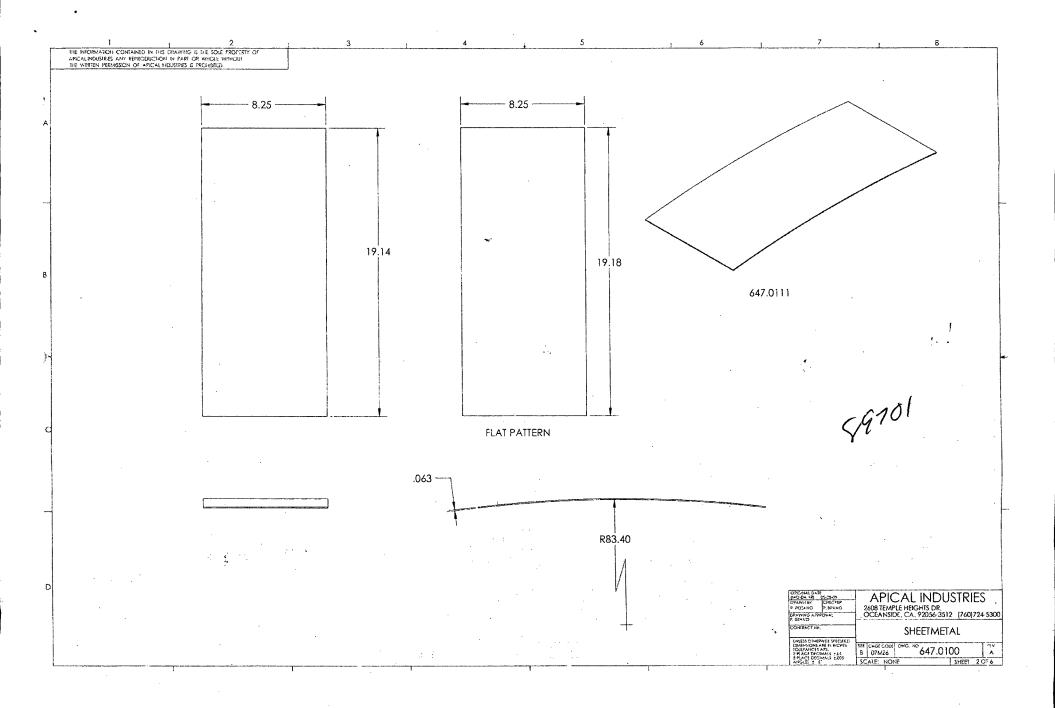
DQA:

Date:



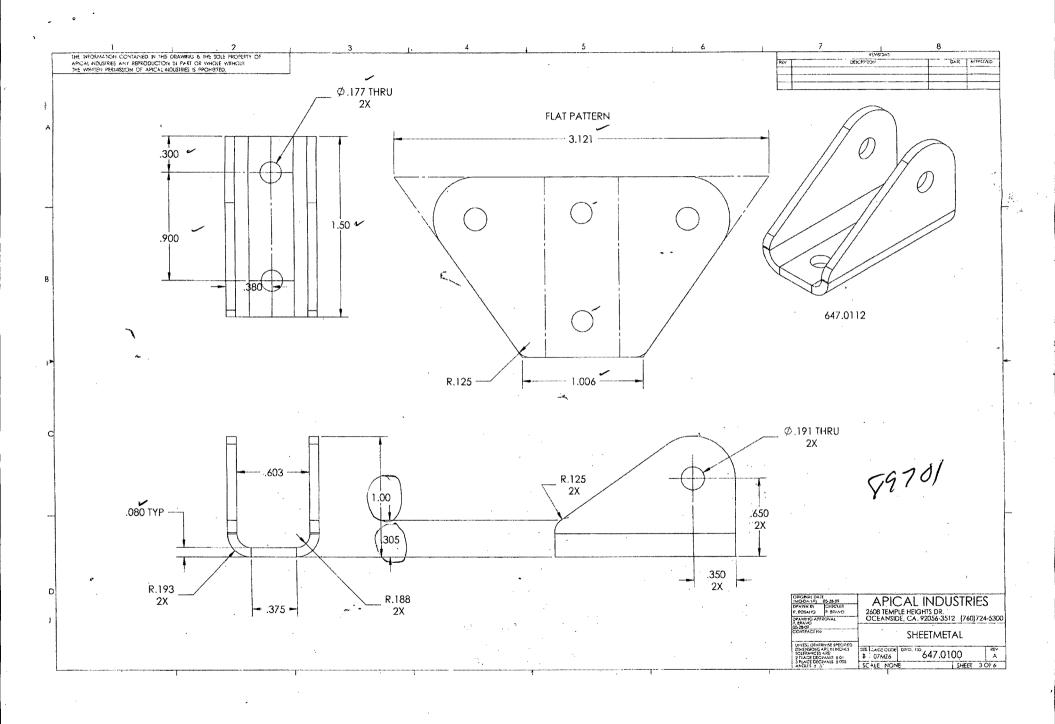
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NCR:	Yes	/ No				WORK ORD	ER NON-C	ON	IFORM	ANCE / UPI	DATE					•
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							Rework			Skid-tube	Crosstube			Water Je	t	Engineering
Part	No.						Scrap		ſ	Machining	Small Fab		Prod	d. Eng. Coor		Quality
							Use-as-is	۱	Therm	noforming	Finishing		Rec/Stor	e/Packaging	_	Other
NCR	No.					Work Orde	er Update			Large Fab	Composite			Supplie	r	
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		Inspection	Strip in	Tube		Cut Too Short	Ī		Misread				Power Loss/	Surge		Other
		Ripples in	Bend			Drill Holes	. [Offset		•					·
		Torque W	aves in E	xtrusior	, [Drawing			Out of C	alibration						
		Turning Se	equence			Finish		- le	Out of S	equence						

Wave/Twist in Tube



		4									DQA:	Date:	
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Part N	<u>.</u>		-,			Rework Scrap Use-as-is			Skid-tube Crosstube Machining Small Fab noforming Finishing			Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR N	0					Work Order Update			Large Fab Composite			Supplier	
Root				Des	crip	otion of work order update	T	Initial	Action		Sign &		
Cause	Date	Step	Qty		0	r Non-conformance	C	nief Eng	Description	\bot	Date	Verification	QC Inspector
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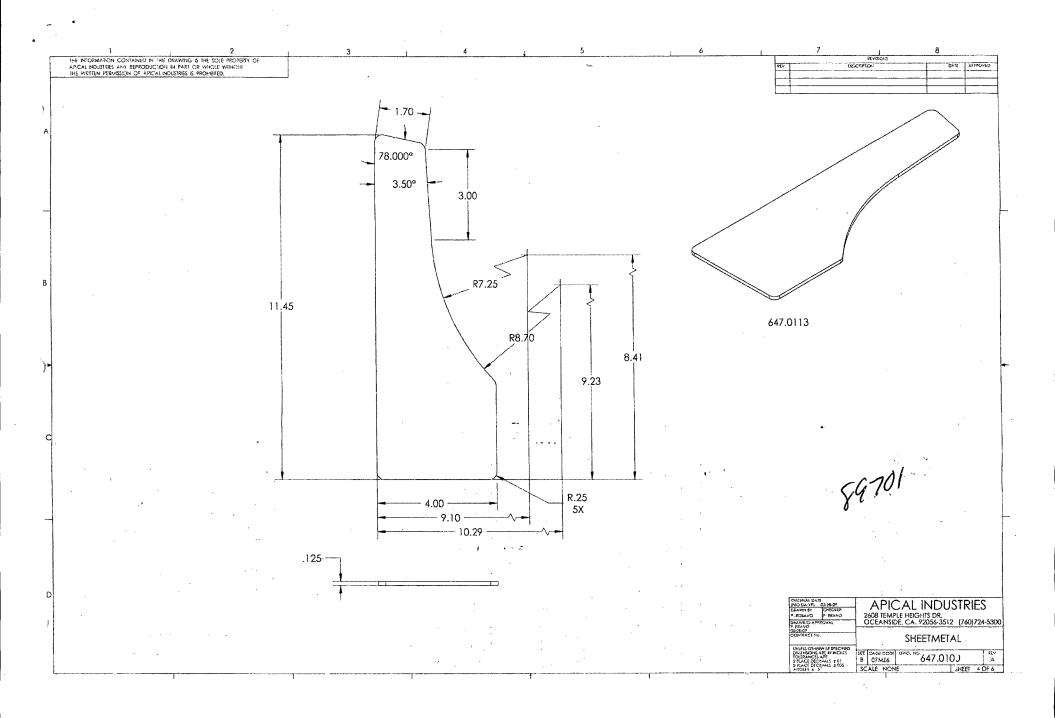
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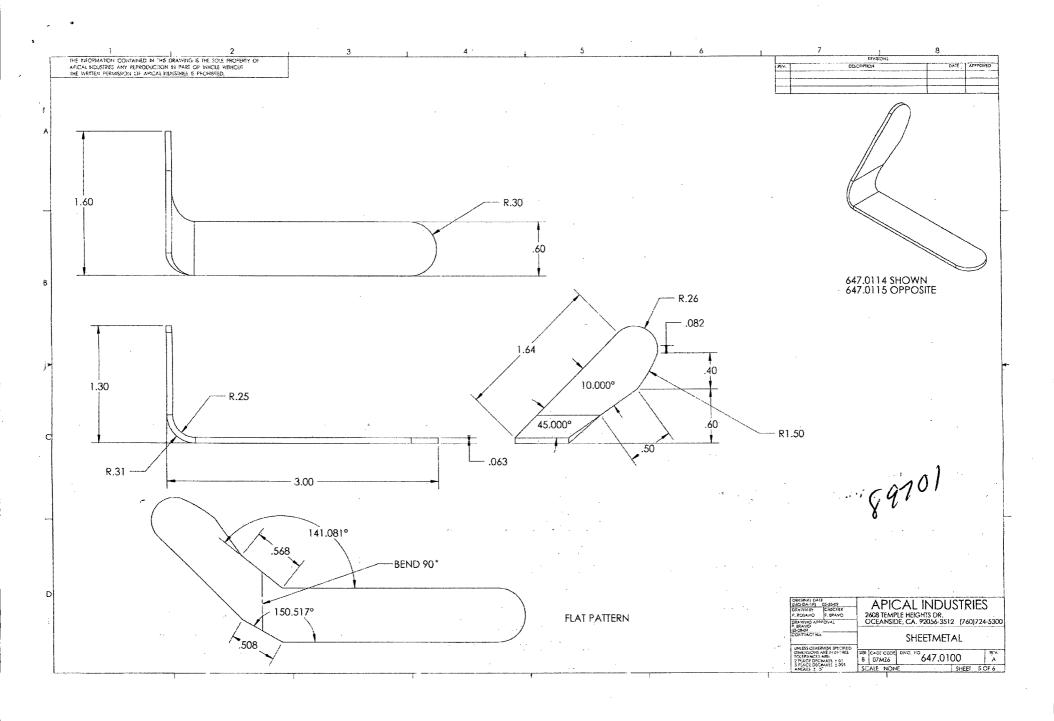
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							·					QA Closed:	Date:	
Vork Ord	ler:						DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
						'	Rework			Skid-tube	Crosstube]	Water Jet	Engineering
Part	No.						Scrap			Machining	Small Fab	4	d. Eng. Coor.	Quality
NCR	No.						Use-as-is Work Order Update		i .	noforming Large Fab	Finishing Composite	Rec/Stor	e/Packaging Supplier	Other
								_				<u>-</u>		
Root					Des	crip	otion of work order update		nitial	Ac	tion	Sign &		•
Cause		Date	Step	Qty		c	r Non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
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	-	Cuffs Heat Trea				 	Contamination Countersink	\vdash	Mislabe			Positioned V	Vrong	
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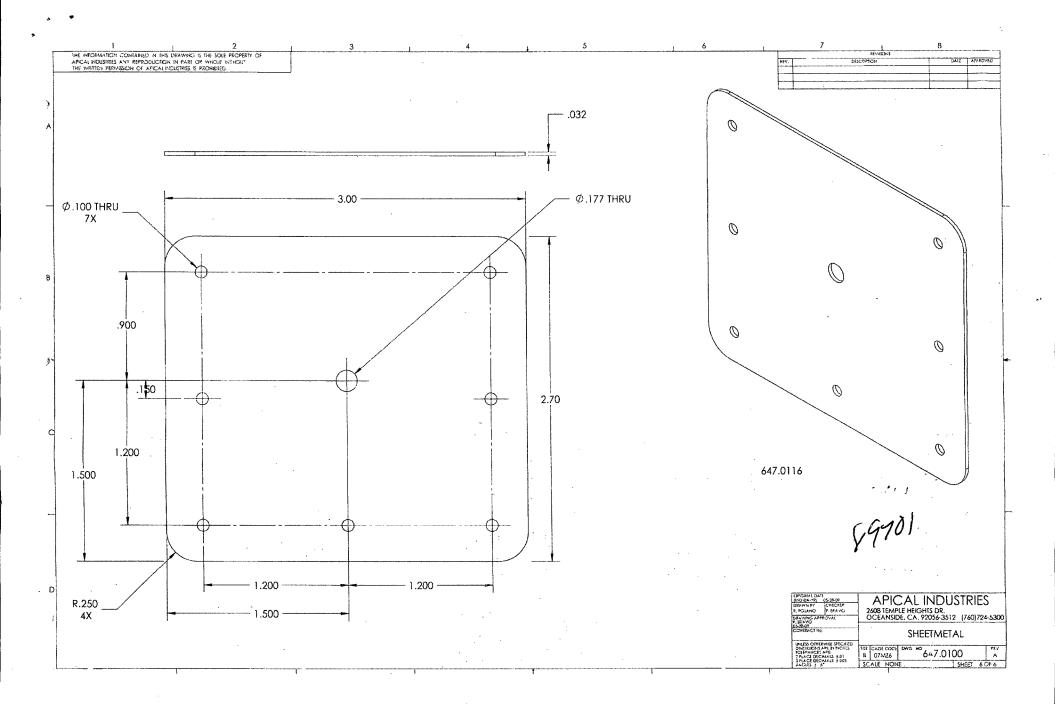
Wave/Twist in Tube



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		Cracks					Broken/Damaged	L	i '	ion Incomplete	Part Incorre	·	Weld	
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Wave/Twist in Tube

DART AEROSPACE LTD	Work Order:	89701
Description: Start Bracket-	Part Number:	647.0112
Inspection Dwg: (247,0100 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0,177"	40.005,00° 40.005,00° 44 0.010"	0.178"	<u> </u>		V	mmoi
00.191"	40.005,001	0.191			V	.,
3,121"	4 0,010"	3,171"	_		V	· ·
1.000	11-0.000"	1.006"	-		V	1(
RO.125"	11-0.00°	0,125"	<i>ν</i>		RG	
0.300"	4/- 0,0,0"	0,307"			V	
0, 900"	11-0:010"	0.901"	_		V	
1.50"	4-0.030"	1.572"	_		V	
0,080"	4-0.00	0,075"			V	
0,350"	1/-0.010	0,357"	_		V	
						Ar.
						, , ,

Measured by:	TM	Audited by: 5m	3	Preliminary Approval:	
Date:	12-9-16	Date: 10-0	7-17	Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	



